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ABSTRACT

This guide, one of a series of publications written for medical faculty to use in designing substance abuse instruction, focuses on the teaching of alcohol and drug abuse intervention in medical and osteopathic schools. Following a brief introducton to the booklet, the career teacher program, which is supported by federal grants, is explained. Curriculum objectives, focusing on definitions; scientific, social, and psychological factors; diagnosis; treatment; and prevention, are given. A discussion on attitude change as a goal of education and a description of various teaching modalities complete chapter 1. Chapter 2 discusses the teaching methodologies of clinical teaching, lecture, interactive teaching, role playing, computer-assisted instruction, small group setting, and audiovisual utilization. For each methodology specific goals or discussion points are offered. The booklet concludes with a list of references and three appendices: the curriculum objectives and goals; an annotated audiovisual materials listing; and an annotated listing of other teaching materials/resources with addresses. (BL)

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Alcohol and Drug Abuse Teaching Methodology Guide for Medical Faculty

MEDICINE I

Jeptha R. Hostetler, Ph. D.

Health Professions Education Curriculum Resource Series

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U.S. DEPARTMENT OF HEALTH AND HUMAN SERVICES
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Foreword

The National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse (NIDA) recognize the vital role of the physician in the diagnosis, treatment, and referral of patients with substance abuse disorders. Physician education in alcohol and drug abuse is of critical importance in our efforts to combat these major medical problems.

In order to support medical school faculty in their efforts to make substance abuse education an integrated, effective part of the curriculum, the Health Professions Education (HPE) Project was initiated by the Training Branch of NIAAA, in cooperation with NIDA. In response to the critical need for useful information in alcohol and drug abuse instruction, the HPE Project conducts a two-part effort to collect existing educational resources and make them available to health professions educators through the National Clearinghouse for Alcohol Information (NCALI) data base and to develop curriculum materials of specific use to medical educators in instructional planning.

This volume is one of a series of publications for use in designing substance abuse instruction and is offered to the medical education community in the hope that it will be a valuable resource in preparing physicians to treat alcohol and drug abuse disorders.

LORAN ARCHER, *Acting Director,*
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Introduction

Alcohol and Drug Abuse Teaching Methodology Guide for Medical Faculty is intended for instructors in medical and osteopathic schools. This monograph presents a variety of new approaches for teaching substance abuse disorders, reviews instructional methodologies that have proved effective in the past, and recommends resources useful for developing alcohol and drug curricula. Medical educators are encouraged enthusiastically to try new ideas, selecting those appropriate to individual needs, style, and expertise in teaching.

In the drug and alcohol abuse field, it is particularly important for the instructor, coordinator, or teacher to go beyond study guides to encourage spontaneity, stimulate enthusiasm for learning, identify the pleasure of creativity, and above all, encourage in students an acceptance of self. This last point is critical. Students must learn to accept themselves before they are able to accept others who may be harmfully involved with chemicals. Therefore, the task for the instructor becomes one of presenting learning situations in which students are exposed to and involved with real people with real problems and illnesses, situations that will meet medical students where they are, and lead them to a new appreciation for the patient.

Alcoholism and drug dependence are not hopeless illnesses; chemically dependent persons can and do recover. One of our missions as medical educators is to cultivate in students a sense of hope and optimism toward persons who are harmfully involved with chemicals so that, as practitioners, they may convey this same hope and optimism to addicted patients. Further, medical students must understand the meaning of intervention, know when and how to confront a patient about drug taking behavior, how to treat the problem and make appropriate referrals for follow-up care.

Chapter 1
Teaching Alcohol and Drug Abuse in the Medical Setting

Major medical organizations and private foundations have pointed out the urgent need for effective medical education in the use and abuse of alcohol and other drugs. In 1972, the American Medical Association Council on Mental Health and Committee on Alcoholism and Drug Dependence issued a position statement entitled "Medical School Education on Abuse of Alcohol and Other Psychoactive Drugs" (1972). An editorial in the *Journal of the American Medical Association* (1972) and a report from the 1972 Conference on Medical Education on Drug Abuse sponsored by the Josiah Macy, Jr., Foundation (1973) agreed, in concept, that too little was being done to expand these educational programs in medical schools.

By 1976 some gains had been made in substance abuse training in the medical setting. According to a national survey conducted by Pokorny and his colleagues (1980), "The general situation has improved, but we still have a long way to go."

Solomon and Davis (1978) concluded in a summary of the status of substance abuse education in medical schools that the poor showing or total omission of teaching/training is due, in large measure, to negative attitudes held by physicians toward drug-abusing or alcoholic patients and the consequent lack of involvement with these patients. This pessimism about the effectiveness of treatment, as well as a general negative attitude toward the patients themselves, has been substantiated as one of the main factors detracting from quality medical education in substance abuse. Researchers point out the ways in which persistently negative physician attitudes affect quality of care: The delay of diagnosis until a patient has become the derelict stereotype (Chafetz 1968); the detrimental effects on detection and management (Fisher et al. 1975); the increase of negative attitudes among medical students in training (Fisher et al. 1975); the reluctance of some healthcare professionals to become personally involved in treatment (Knox 1971); and the indications that even physicians specializing in addiction treatment have more negative attitudes toward patients than do nonmedical staff (Sowa and Cutter 1974).

Career Teachers Program

One survey of 409 primary care physicians suggests that there is a general resistance by primary care professionals to the subject of alcoholism (Zuckerman 1977). Much of this resistance may reflect a lack of education and training in the diagnosis and treatment of patients who are harmfully dependent on alcohol and other drugs. In 1971, the National Institute of Mental Health (NIMH) developed a program that would encourage interested medical school faculty members to teach about substance abuse. These Career Teachers in Alcohol and Drug Abuse are supported by Federal grants administered jointly by the National Institute on Alcohol Abuse and Alcoholism (NIAAA) and the National Institute on Drug Abuse (NIDA). At present, 60 medical, osteopathic, and dental schools across the country participate in the Career Teachers program, with others soon to be included. In addition, the State University of New York Downstate Medical Center is designated as a national center for training Career Teachers. The Career Teacher Training Center supports the Career Teacher program by aiding in grant preparation, coordinating Career Teacher conferences, sending out announcements and educational materials, and planning clinical experiences for visiting Career Teachers.

The initiation and growth of the Career Teacher

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effort has resulted in substantial contributions to the inclusion of alcohol and drug material in the medical curriculum and to the development of curriculum objectives for physician education in substance abuse (Davis 1980).

Curriculum Objectives

Careful formulation of curriculum objectives is a prerequisite for a successful and worthwhile course. To aid instructors in this process, Career Teachers in Alcohol and Drug Abuse program personnel, in conjunction with the Association of Medical Education and Research in Substance Abuse (AMERSA), have prepared a comprehensive listing of curriculum objectives (see appendix A). The listing includes detailed objectives in the following areas:

A. Definitions
B. Epidemiology-genetics
C. Basic sciences (biochemistry, physiology, pharmacology, and pathology)
D. Sociocultural factors
E. Psychological factors
F. Diagnosis and treatment of overdose
G. Diagnosis and treatment of withdrawal states
H. Diagnosis and treatment of substance abuse
I. Legal, ethical, and historical aspects
J. Prevention

Objectives can be selected on the basis of what the instructor and his or her committee believe to be most relevant, considering the period of time in which they are to be achieved. At any institution there may be a particularly strong discipline that can be highlighted in the course, keeping in mind a balance between disciplines. The objectives are valuable not only as a place to begin but also as guidelines for making certain the most important areas of learning are being considered. In addition to the objectives, the educator needs to choose the setting in which the material is presented, as well as the separate objectives for teaching attitudes and skills.

Attitude Change as a Goal of Education

Medical educators have had mixed success in developing and maintaining among students positive attitudes toward substance abuse or substance-abusing patients. For example, in one study specifically aimed at attitudinal changes among medical interns, there is indication that, following a 5-month concerted effort to alter negative attitudes, the negative attitudes of the interns appeared "remarkably stable over the period of time studied" (Reynolds and Bice 1971). Medical students and physicians are not alone in clinging to these preconceptions about alcoholic patients. Social workers in another study were also resistant to attitudinal change. During a specific course, the students' knowledge of substance abuse increased significantly at the same time as their discomfort with patients grew more pronounced (Bailey 1970). Because of the serious impact of negative attitudes on the willingness of the healthcare provider to effectively treat the alcohol- or drug-dependent person, considerable attention is given in this text to the problem.

There is some indication that negative attitudes toward substance-dependent persons can be ameliorated by carefully constructed educational experiences (Fisher et al. 1975), especially if these experiences emphasize clinical problems and small group discussions (Chappel et al. 1977). Seminars reportedly also can have a favorable effect on student attitudes, at least in selected areas (Clifford 1959; Brennon et al. 1974). As one Career Teacher (Chappel 1973) asserts:

> Changes in attitude are necessary at both physician and institutional levels if drug dependence is to be adequately treated. Such a change in attitude is possible. The history of mental illness shows a gradual shift from medieval rejection and punishment to increasingly effective treatment which is more and more being incorporated into the mainstream of medical care.

In the medical education setting, altering attitudes is basic to succeeding as a teacher. According to another medical educator and alcoholism authority (Williams 1975): "Positive education must often begin with attitude change. Attitude change may begin by taking a careful look at our own drinking practices, at the drinking of others, and our reaction to it. Unless we can look at these potential problems objectively, there is small hope that we can be objective with the alcoholic patient." In preparing substance abuse curricula, medical educators need to consider the relationship between the teaching setting and the opportunities for attitude change.

Teaching Modalities

Medical educators need to distinguish between education and training. Education is a process by which a heterogeneous group becomes the focus of certain goals and techniques but remains a heterogeneous group. In contrast, training is a process through which a heterogeneous group is aided in becoming a homogeneous group in order to develop specific skills, abilities, attitudes, and values (Einstein 1974). In the best of both worlds, the challenge for medical instructors is to adopt teaching modalities that incorporate both education and training in diagnosis, detoxification, treatment, and management of chemically dependent patients.

In developing a substance abuse learning strategy, the learning styles of medical students also should be considered. Research studies indicate there are four main learning styles: accommodate, diverge, converge, and assimilate (Sadler et al. 1978). Each style has its own learning preferences (see table 1).

This particular model suggests that if teaching in substance abuse provides concrete experiences and active experimentation, it will be more or less congruent with the learning preferences of more than 80 percent of students. At the same time, this heterogeneous group of physicians-to-be will be focusing on a clear goal: better health care for the chemically dependent person.

In essence, quality teaching of medical students in the substance abuse field is best implemented when, as Flexner (1960, p. 53) suggested more than 70 years ago, the student participates in the activities of learning:

> On the pedagogic side, modern medicine, like all scientific teaching, is characterized by activity. The student no longer merely watches, listens, memorizes: *he does*. His own activities in the laboratory and in the clinic are the main factors in his instruction and discipline. An education in medicine nowadays involves both learning and learning how; the student cannot effectively know unless he knows how.

Table 1

Learning Styles	Learning Preferences	Percent of Student Choice
Accommodate	Concrete experience Active experimentation	43
Diverge	Concrete experience Reflective observation	16
Converge	Abstract conceptualization Active experimentation	28
Assimilate	Abstract conceptualization Reflective observation	13

Chapter 2
Teaching Methodologies

Clinical Teaching

The term "clinical teaching" conjures up diverse images and settings perhaps as diverse as are individual approaches to clinical problem solving. In fact, when medical educators are pressed for an answer to the question "How do you teach your students in the clinical setting?" they often reply that teaching clinical skills and diagnosis is an art based largely on intuition. Yonke (1979) speaks for many instructors when he affirms the opportunities available to students in a clinic: "No richer experiences are potentially available in a student's education than those in the clinical setting. Here a student can synthesize and apply the enormous amount of content previously learned."

Recent attempts at redefining clinical teaching have moved away from "teaching as art" toward teaching as the achievement of descriptive goals; namely:

1. To help students integrate and assimilate factual information in problem solving
2. To teach the diagnostic process as a separate cognitive process
3. To demonstrate interpersonal skills
4. To provide students with the opportunity for self-understanding (Royal College of General Practitioners 1972)
5. To teach skills related to the management of the patient (Lewis 1980)

Other experienced clinicians suggest that "effective teaching of the process of clinical diagnosis calls for teachers to be able to articulate their own cognitive processes when making a diagnosis" (Dudley 1969). Still other investigators suggest that "students should be taught some theory of diagnosis so they might engage in effective problem solving and decisionmaking" (McWhinney 1972).

According to students' perceptions, it is clear that several factors stand out as facilitating good clinical teaching. Student participation, instructors' attitudes, student-centered strategies, as well as supervision and practice, are all essential components of successful clinical teaching. Clinical instruction most naturally occurs on clinical rotations but need not be limited to this setting.

Several approaches to clinical teaching outside the clinical setting are quite useful for first-year medical students and for students in continuing medical education. For example, drug-taking histories can be obtained by students under supervision and recorded on videotape for first-year medical students, case presentations can be made at any time along the medical education continuum, and diagnosis techniques can be integrated into the curriculum.

The five goals for clinical teaching mentioned above are central to training students in diagnosis and treatment of chemically dependent persons. This teaching/training can occur in nearly every medical discipline, including internal medicine, obstetrics and gynecology, family medicine, emergency medicine, surgery, pediatrics, and psychiatry, and in nearly every clinical setting, including physicians' offices, outpatient clinics, medical grand rounds, and ambulatory medicine. A discussion of each of these goals follows.

Goal 1. To help students assimilate and integrate factual information in problem solving

Where better to learn to assimilate and integrate factual information than in the process of taking a drug-use history? In order to solve problems, i.e., collect data and make accurate diagnoses, students need to learn

how to take histories and do physical examinations in general, and learn how to do drug-taking histories in particular.

Whitfield (in press) suggests three methods for obtaining information regarding an individual's drug or alcohol consumption:

- Direct questioning or simply talking to the patient
- Inductive reasoning
- Quantitative testing, such as the Michigan Alcohol Screening Test (MAST) (Selzer 1971) and the Blood-Alcohol Concentration (BAC) Test

Direct questioning may meet with unreliable answers because of the strong denial often maintained by alcoholics and drug-dependent patients. It is helpful if the questioner can lead into the subject, perhaps immediately after inquiring about cigarette smoking or other use of tobacco, but even then only tangentially. For example, questions such as "How much do you drink?" or "Do you smoke pot?" are often met with evasive answers. On the other hand, questions such as "What happens to you when you get drunk?" or "Have you ever wondered whether or not you have a drinking problem?" are much less threatening and can serve as a springboard for pursuing other questions in the drug-taking history.

The ability to present a model of gentle persistence is one key to teaching drug-use history taking. The instructor may well approach the subject from several angles if the first series of questions produce anxiety or appear threatening to the patient.

According to Whitfield (in press), "Whenever during the drinking history the patient gets angry, or evasive, or says he/she stopped drinking altogether, or says he/she drinks more than three drinks a day, the person may be alcoholic."

Inductive reasoning is another process through which a tentative diagnosis of possible alcoholism may be made. The interviewer focuses questioning around the type and level of personal problems the patient may be experiencing at home, at work or in social relationships. The responses, if honest, can provide information on how effectively the patient is functioning. Excessive difficulties could indicate alcohol abuse. Further, if one uses the National Council on Alcoholism (NCA) "Criteria for the Diagnosis of Alcoholism" (1972), and the answers to the life-problem questions meet the NCA major criteria, one's suspicion of alcoholism should be very high.

Quantitative testing also can give solid evidence of problems with alcohol, even though, in itself, it is not proof that a person is indeed an alcoholic. For example, a BAC of 0.15 mg% without signs of intoxication, or a BAC of 0.3 mg% at any time, is suggestive of alcoholism. Diagnosis, however, requires supportive evidence from a separate history-taking interview. The same may be said for a positive MAST score: It is strongly suggestive, but requires supportive evidence.

In teaching the skills of taking drug histories, the following steps may be helpful:

1. Instructor demonstrates history-taking techniques by interviewing patient(s) in front of the students
2. Students obtain drug-taking histories from each other; they reverse roles and repeat
3. Students interview alcoholics and other chemically dependent patients, or since alcoholics are often frustrating to interview, students role play taking a history from recovering alcoholics first, and then from nonrecovering alcoholics
4. Students evaluate drug-taking histories to arrive at diagnoses

At each step in the process, the instructor must take an active role in both supervising and encouraging the students. Furthermore, students need to be provided with a general evaluation of their performance during training.

Goal 2. To teach the diagnostic process as a separate cognitive process

Drug or alcohol history taking alone may not be sufficient to delineate all the criteria necessary to diagnose alcoholism or other drug dependence. In this case, an indepth history will need to be taken. Some authors (Whitfield in press) find it helpful to pursue the major diagnostic criteria (level 1) compiled by the NCA (1972). Yonke (1979) suggests the following guidelines for teaching the diagnostic process:

1. Emphasis on problem solving and integrating basic science content with clinical method. This is effectively done by student participation.
2. Development of a patient-centered rather than a disease-centered orientation.
3. Development of an awareness of teaching style in working with patients and students and an understanding of the diagnostic process as a tool to help students develop their own problem-solving methods.
4. Careful supervision of students.
5. Outgoing and friendly instructors.
6. Inclusion of manual skills.
7. Allowing students to learn about themselves.
8. Sharing readings and research interests.

Students can be taught how to take histories that will focus on the following key criteria established by Whitfield (in press).

1. Withdrawal, which may manifest itself in any of these six symptoms: delirium tremens; gross tremor; hallucinosis; hypertension, tachycardia; insomnia, nightmares, irritability; or withdrawal seizures.
2. Alcohol tolerance, which may be manifested by either drinking a fifth of whiskey (or the equivalent in wine or beer) daily for at least 2 days (180 lb. person), or BAC levels of 0.10 mg% at time of medical appointment, 0.15 mg% without gross intoxication, or 0.3% mg at any time.
3. Drinking in spite of strong, identified social or medical contraindications.
4. Blatant, indiscriminate use of alcohol.
5. Pathological findings of either alcoholic hepatitis or cerebellar degeneration.
6. Loss of control over intake.

NCA's "Criteria for Diagnosis of Alcoholism" (1972) includes minor criteria for levels 2 and 3, criteria for identifying the early, middle, and late stages of alcoholism, as well as a listing of other symptoms that may or may not be present in a given patient.

In addition to taking the medical history, seeking information concerning the patient's well-being in nonmedical dimensions, such as employment, marital, financial, social, legal, and religious, is often an invaluable way to determine problems that may be drug related.

Goal 3. To demonstrate interpersonal skills

Developing interpersonal skills is a lifelong process. The clinical setting provides ample opportunities for initial encounters and formative training. Chemically dependent persons are quick to note insincerity, moral judgment, and "do-good" attitudes among health care and social service professionals and paraprofessionals. Therefore, training students in interpersonal skills is essential. Discussing the myriad number of interpersonal skills is beyond the scope of this guide. However, Kahn and his colleagues (1979) list the following important areas of interpersonal skill development:

1. Interpersonal process—listening, observing, responding, etc.

2. Information gathering (interviewing)—history taking, etc.
3. Information giving/counseling—education, etc.
4. Psychological intervention—psychological support, etc.
5. Team membership—group problem solving, etc.
6. Supervision—feedback, supervision contracting, etc.
7. Special application areas—difficult patient, suicide prevention, etc.

These interpersonal skills are involved in the diagnosis, treatment, and management of chemically dependent patients. Of particular importance is interpersonal process; i.e., listening, observing, responding, and initiating-questioning-challenging. Students can sharpen these skills by encountering patients and receiving quality feedback. Videotaped patient interviews allow students to observe physician/patient interpersonal process skills and interactions. Chappel and his colleagues (1977) suggest that taped interviews provide the students with several advantages over live presentations: "They are shorter, more flexible, more specific, providing a better role model, representing more accurately the physician/patient relationship, and dealing more rapidly with sensitive issues without arousing concern for the patient in observing physicians."

Another approach to teaching interpersonal process skills is to divide the student group into triads. In rotation, each member of the triad serves as the chemically dependent patient, the recorder-observer, and the physician-interviewer. After each session, the recorder-observer reports what he or she has observed in the listening, observing, responding, and initiating-questioning-challenging areas. The triads are brought back to plenary session so that reactions, comments, and discussion of interpersonal process skills can be initiated immediately. Care must be taken to clarify the manner in which listening, observing, responding, and initiating-questioning-challenging are to be scored. For more information on teaching interpersonal process skills in a group setting, see Foley and Smilansky (1980).

The use of videotaped interviews, after permission of the student and patient has been obtained, is one of the most effective methods of teaching interpersonal process skills. Students become directly involved both as participants and evaluators. This learning experience provides an excellent opportunity for the future physician to evaluate his skills and objectively observe his or her own manner of interacting with a patient.

Goal 4. To provide students with the opportunity for self-understanding

Having students meet with alcohol and other drug-dependent persons can result in the students' discovery of their own feelings and attitudes toward these individuals. This involvement can contribute to a greater understanding of the problems resulting from substance abuse, and this can be done by requiring students to attend Alcoholics Anonymous (AA) meetings. AA meetings are of two types: open and closed. The larger, open meetings can provide students with a basic understanding of AA's approach. It is relatively easy to arrange for students to also attend the smaller and more intensive closed sessions. In pairs, student can go to one of the numerous meetings in their area and submit written or oral reports concerning their feelings about the persons they met. In addition, in order to more fully comprehend the extensive involvement of alcoholism in other persons' lives, students will benefit from attending a least one Al-Anon meeting and reporting back in a similar manner. Information concerning time and place of AA meetings can be obtained from a local chapter by contacting the chapter listed in the telephone directory or Yellow Pages.

A second step in helping students to clarify their feelings and attitudes toward alcohol and drug abusers is to assign each student to an alcoholism or drug abuse counselor. The student can be required to meet with the counselor for at least a 1-hour session in which the counselor probes the student's attitudes toward the use of chemicals and toward chemically dependent persons. This second step is an invaluable and enlightening experience for students. They are confronted, perhaps for the first time, with their *own* use or abuse of chemicals and their justification or rationalization for that use (Hostetler and Hart 1979).

Another method to help students understand their own feelings and attitudes is to introduce them to the team approach of treating chemical dependence. Providing positive settings in which the expertise of nonprofessionals and paraprofessionals can be utilized is critical because these offer opportunities to break down the barriers and prejudices that frequently exist between medical professionals and nonmedical personnel. It is important for students to understand that strengthening team effort and accepting the contributions of each team member are vital keys to promoting health for the alcoholic. Therefore, a panel of health care providers composed of a physician, a nurse, a social worker, an alcoholism counselor who is also a recovering alcoholic, and paraprofessionals can accurately reflect the interdisciplinary approach often seen in an actual drug treatment center. In a discussion period with panel members, students can explore their own attitudes and understand the opportunities and difficulties inherent in the team approach.

Goal 5. To teach skills related to the management of the patient

Even though it may not be possible in all medical schools to have students visit an alcoholism or drug abuse treatment program, it is still one of the best methods for acquainting students with treatment and rehabilitation modalities. Seeing and observing treatment-in-progress is one of the most enlightening and educational opportunities available to the students. In lieu of visiting a treatment center, it may be possible to recruit a team from an alcoholism or drug abuse treatment facility to visit the medical school and present an overview of their program. A question-and-answer period allows students the opportunity to become involved with the treatment team.

Another technique to teach patient management skills is to structure a learning experience in which the student interacts directly with a presenting physician and a patient. Further, the instructor should not restrict the student's knowledge to the medical model but also acquaint the student with a variety of treatment modalities, such as behavior modification or the therapeutic community (Pattison 1976).

The significance of self-help groups such as AA, Al-Anon, Alateen, and Ala-Fam has already been mentioned in terms of student field trips and reports. Another approach to understanding these organizations is to have a panel of representatives of AA, Al-Anon, Alateen, and Ala-Fam discuss the major similarities and differences among groups. It would be helpful to schedule the panel presentation before students attend any of the self-help group settings.

The needs of particular populations, such as women, the elderly, minorities, and adolescents, can be emphasized by inviting the directors of treatment programs for these groups to speak to the students. It may be necessary to go outside the immediate community to find specialists for each population.

In order for students to begin managing the chemically dependent person, it is important that they be well acquainted with treatment centers in the area and the services provided by mental health and social

service agencies and other support groups, such as religious or private organizations. The specific details of how to make referrals, whom to contact, and the protocol involved can all be handled in relatively brief time either through a short lecture or through films and videotapes available from local agencies.

Aside from the clinical instruction already discussed, what other formats are available for teaching alcohol and drug abuse management through participatory learning? There is no simple answer to this question. However, a careful analysis of the academic climate at one's own institution, together with an investigation of available teaching approaches, can provide a basis for deciding how best to present alcohol and drug abuse material to preclinical undergraduate medical students. The amount of time provided for substance abuse training and teaching must also be factored into this analysis.

The following section will present additional teaching options including the lecture method, lecture and panel discussion, and role playing. Appendix C lists some materials and resources of particular help to medical educators for using these and other methods of instruction.

Lecture

The lecture method has a number of advantages. "It is economical in terms of instructor-student ratio, space requirements, and, often, the preparation required" (Foley and Smilansky 1980). But this form of instruction is one of the least effective, if improperly used (Broadwell 1980). The "straight" lecture merely tells somebody something; it transmits information. The "instructor does all the talking, based on prepared notes, and the students listen, take notes, and get their learning in whatever way they choose" (Hatton 1979). Student involvement is virtually nonexistent. Research shows that an average of 80 percent of information delivered in lecture form is forgotten in 8 weeks, yet medical faculty continue to use this form of teaching. In a lecture given by a brilliant scholar with an outstanding topic and a highly competent audience, for example, 10 percent of the audience displayed signs of inattention within 15 minutes. After 18 minutes, one-third of the audience and 10 percent of the platform guests were fidgeting. At 35 minutes, everyone was inattentive; at 45 minutes, trance was more noticeable than fidgeting; and at 47 minutes, some were asleep and at least one was reading. A casual check 24 hours later revealed that the audience recalled only insignificant details, and these were generally wrong (Frost 1965).

The need to go beyond the "straight" lecture is obvious, given the premise that student involvement is essential for good retention, assimilation, and integration of relevant information. Visual aids can help turn a "straight" lecture into one of moderate interest for the students. The use of a chalk board or newsprint can create interest in particular points or concepts. One need be aware, however, that facing a chalk board or newsprint diminishes eye contact with the audience, making it more difficult for them to understand the speaker. Therefore, visual aids should be used sparingly.

Some lecturers choose to use the overhead projector, with rolling, clear acetate overlays. Overhead projection has two advantages: It permits the lecturer to prepare the overlays ahead of time, and it allows him or her vital eye contact with the students during presentation. Illustrated lectures also offer a welcome change from "straight" lectures. Quality filmstrips and

slide (2 x 2) presentations are available commercially (see appendix B). However, the instructor should be careful to use filmstrips and slides moderately and not utilize "packaged," illustrated lectures as the primary instructional method.

Some instructors distribute partial outlines, allowing the student to fill in the notes as the lecture proceeds. Others choose to give handouts, after class, which either outline the lecture, supplement the lecture, or both. In any event, whether one gives a straight lecture, or augments it with visual aids or handouts, the students are still relatively passive, with little interaction with the instructor.

Interactive Teaching: Panel Discussion/Lecture-Discussion

The panel discussion or lecture-discussion format can be helpful in bringing about student participation and can be done in several exciting ways. This section describes methods an instructor can use to increase student involvement in the learning process.

Several Career Teachers at the 1980 AMERSA-Career Teacher Conference in Washington, D.C., had high praise for the "recovery panel" method of teaching/learning, a method that is exciting and engaging for both students and instructor. The recovery panel consists of several professionals, including physicians, who are successfully continuing their recovery from alcohol or drug abuse. During the panel presentations, each member emphasizes the factors that brought him or her to the point of overuse and dependence on alcohol or other drugs. Panel members often describe how they were confronted about their dependency and who successfully intervened to get them into treatment. Following the presentation, the panel members respond to questions and comments from students. This proves to be a most effective and personally involving aspect of the panel method.

After the panel discussion, the instructor should hold a followup session with the students to address the feelings and questions raised by the frank disclosure of the physician panelists about their alcohol or drug abuse problems, and issues such as the students' own drug or alcohol use, the pressures of working as a practitioner, ethical considerations, and the obligation to fellow students or doctors with substance dependency. It is highly recommended that the instructor show to the students the video cassette, *Alcohol and Drug Abuse Among Physicians* (see appendix B). This film presents candid interviews with two rehabilitated doctors and their wives about their personal experiences with alcohol and drug abuse.

A second approach to interactive learning is the lecture-discussion. The following three techniques provide changes of pace within the lecture format and encourage student participation.

1. Occasionally, the instructor may choose to ask an individual member of the audience a specific question regarding the material. Although this approach may produce anxiety in students, reasonable and relevant questions can keep the audience alert and facilitate comprehension of the material.
2. Strategically placed questions addressed to the group also can add interest to the learning setting. Additionally, they can provide the instructor with useful information. Questions such as "How many of you have ever attended an Alcoholics Anonymous

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meeting?" can emphasize the lack of first-hand involvement in self-help recovery groups. The group question can be followed with an individual question "What do you think they do at AA meetings?" which can lead to a discussion of what happens at an open AA meeting.

3. Through the use of handouts, lecture-discussion meetings can provide opportunities for student interaction and feedback. Skeletal or incomplete lecture outlines can be filled in by the students either before or after they have verbalized some of the concepts the instructor wants to emphasize.

The lecture, then, need not be a static, "straight" lecture. Rather, it can incorporate limited discussion, audiovisuals, and appropriate "breaks" to give the students a chance to rethink the ideas and to maintain a level of alertness that will help them to comprehend the material.

Role Playing

Role playing is a process of simulating events, situations, or encounters. Although contrived, role playing sometimes allows the instructor and students an even greater flexibility and control than is possible with encounters with the substance-abusing patient. It is particularly effective in teaching interviewing skills and uncovering student attitudes toward substance-dependent persons.

There are many advantages to using role playing:

- Role playing is active and involved learning.
- Role playing simulates "real life" clinical encounters, giving students the opportunity to confront the practical problems inherent in translating cognition and theory into attitudes, skills, and actions.
- Roles can easily be modified to illustrate or emphasize significant points.
- The role play can simulate an extended time span or a change in location, age, health status, etc.
- Feelings can be identified and explored as the role players are questioned afterward about the interview or interactions.
- Role playing, when properly done with processing and feedback, initiates active discussion.

It is also important for the instructor to be aware of the drawbacks or disadvantages of role playing. Some students are threatened by the thought of "acting." Also, in unskilled hands, role playing can deteriorate into meaningless "games" or emotional reactions can be elicited that are not dealt with in the discussion following the role play. It takes careful preparation and stage setting to make role playing a successful and positive learning experience.

"Instructor plays patient" is an effective scenario for role playing. A knowledgeable instructor can take the role of the patient and, when appropriate, switch to the physician role to provide information about the patient. Students can question the instructor-patient as if taking a history, thus providing practice in history taking in a low-anxiety setting. Experienced instructors recommend that "clear guidelines be written so that faculty members, instructor-patients, and students will share a common understanding of the role each has" (Anderson and Meyer 1978).

Students can be instructed to play a variety of roles, such as family members, significant others, or employers, in a variety of situations that relate directly to alcohol or drug abuse problems. It is important that

the students understand the characters, setting, and objectives of the scene in which they are participating. Group members not directly involved in the role play may be assigned alter ego, coach, or observer roles to keep them actively involved in the process. Examples of role-playing situations valuable in alcohol and drug abuse education and training include:

- Confronting a chemically dependent patient
- Taking an alcohol or drug history
- Dealing with a manipulative, analgesic-dependent hospital patient or outpatient
- Initiating, preparing, and executing family or household intervention
- Prescribing minor tranquilizers for an outpatient with anxiety
- Counseling the distraught parent of a drug-dependent youth
- Establishing rapport with a belligerent patient

Role playing by itself is a useful and active teaching tool. However, the impact of its usefulness is best utilized when there is follow-up, particularly when the participants are questioned about their feelings. Observer-reporters can play a vital role by commenting on positive and negative interactions of the participants, sharing emotional responses, and making suggestions for improvements. Further discussion focusing on processing feelings and reactions is needed to effectively bring closure to this experience.

Needless to say, the instructor's function in the role playing is crucial. As one educator suggests, "While you are role playing it is important not to abandon your role as teacher. As the role play ensues, watch for emerging leaders in the group, attempt to involve the quieter students, and encourage time out for discussion when students' need for some direction becomes apparent" (Hatton 1979).

Patient Management Problems and Computer-Assisted Instruction

A patient management problem (PMP) is a simulation of the pertinent data of an individual with medical problems. The PMP includes such factual information as medical history, complaints, and physical and laboratory findings. The PMP may be presented as a written report, a computer printout, or a role play. Depending on the form the PMP is given, students are asked to decipher the written information, to question the role players, or to interact with the computer to elicit additional information. In each case, the student is challenged to move through sequential steps in diagnosing the medical problem and in prescribing treatment.

Different types of clinical problems can be adapted readily to the PMP format, including emergency care of the intoxicated person, diagnosis of alcoholism or drug abuse, management, or treatment alternatives. The major advantage of a computer-assisted PMP is its utility as both a teaching tool and a method of assessment.

The following material, adapted from Hunt (1979*a*; 1979*b*), may be helpful in pointing out the steps often followed in developing a PMP. In preparation, medical educators need to obtain and review several PMPs from persons who have already produced them; instructors will also want to consult with other educators who have had success with the PMP method. Reading indepth articles or books on producing PMPs

also provides valuable information. It is important to realize that developing a PMP is very time consuming. It is not uncommon for the entire process, especially when it involves computer assistance, to take 6 months to 1 year to complete.

Specific steps in producing a PMP include:

- Selecting the problem
- Plotting the decision sequences
- Writing the scenario
- Developing the sections
- Testing the problem (working out the "bugs")
- Planning the disclosure process
- Scoring the problem

Computer assisted instruction (CAI) is a very effective method of presenting a PMP. Currently, several computer-simulated substance abuse patients are available. A telephone and a computer terminal tie any school into the system. One such CAI case is entitled "Fatigue." It presents a woman who is a housewife and mother in an intact nuclear family; she is an alcoholic who complains vaguely to her physician of fatigue. She has depression, hyperlipidemia, gastritis, marital problems, and difficulties with her children (NIAAA/NIDA 1978). Programmed at the University of Michigan Medical Center, "Fatigue" takes about 1 hour for a student to complete at a computer keyboard terminal at his or her own school. The computer gives feedback at the end of the session and scores the interaction on a number of variables. Other CAI programs are in the making. A newly funded project at the State University of New York Downstate Medical Center includes the development of extensive computer-assisted programs in alcohol and drug abuse. Cases will deal specifically with the diagnosis, detoxification, treatment, and medical management of chemically dependent patients.

Small Group Settings

Small groups are generally more effective than large, discussions more effective than lectures, and student-centered discussions more effective than instructor-centered discussions for such learning goals as retention, application, problem solving, attitude change, and motivation for future learning (McKeachie 1971). Students can learn from each other and gain an appreciation of colleagues as resources. The group provides an opportunity for active student participation, personalizes the learning process, and allows for excellent instructor-student ratio.

A group discussion in an educational setting should have a skilled leader to prevent its deterioration into a "bull session." Efficient use of time is important to each medical student and instructor. Flexible but structured small group discussions provide some of the most stimulating and worthwhile learning experiences available. However, the instructor needs to have a clear understanding of the group process, how to facilitate group movement by directional questions, encourage participation, provide guidance and feedback, and summarize what has been learned. If the teacher possesses limited skills in group dynamics, it is essential that he or she recruit persons who can provide that expertise until the instructor feels competent and confident using this mode of teaching.

It is necessary for the instructor or leader to establish ground rules before the session begins. Ground rules may include specific information on time, objectives, process, and expected conduct of participants.

The following are suggestions concerning two important content areas in which the small group discussion may be effectively used:

1. Discussion of previously presented material or experience

- *First experiences at an Alcoholics Anonymous, Al-Anon, or Alateen meeting.* Medical students can be sent in pairs to community AA meetings and asked to write a brief report of their feelings about their encounter with recovering alcoholics. Upon completion of the assignment, small group discussions may be used for processing information and feelings and receiving feedback. Additional material, such as "The Twelve Steps" or the "Twelve Traditions of AA," can also be brought into the small group setting.
- *Review articles.* The small group setting can be a time-saving and useful method for students to learn of current scientific and programmatic literature. The instructor assigns to each student a limited number of articles or topics for review. In the group, the student summarizes his or her findings for the members who are then given the opportunity to comment, ask questions, and discuss the material presented.
- *Audiovisual material.* It is advantageous to orient the students prior to presenting a film, videotape, or slides. The instructor should indicate the purpose of presenting the particular subject matter, what students should look for, and its future value to them as practitioners. In the discussion following, care should be taken to avoid issues such as artistic merit, camera work, or other technical matters.

2. Discussion groups as application and implementation forums

- *Problem solving via case presentation.* A written, one-page case can be given to students prior to the discussion group meeting. The group leader, either a medical student or the instructor, can present the case. Students are then free to discuss the details of the case: its strong points, how it was handled, what could have been done differently, and other pertinent features. A patient or client can meet with the discussion group and serve as a resource person, responding to questions, commenting on student reactions, and providing firsthand knowledge and understanding of chemical dependency. Students find this interaction stimulating and broadening. Care should be taken to involve all of the group and not allow the visitor to monopolize the discussion.
- *Group tasks as application/implementation.* It is exciting to see medical students accept the challenge of a specific group learning task. One approach involves small groups preparing a particular segment of drug or alcohol abuse material. For example, a large medical student body could be divided into four small groups, each assigned a 15-minute presentation on a given topic. One group might present diagnostic criteria, another detoxification methods, and another group treatment concepts. The instructor meets with each group to help students clarify their objectives, limit the area covered, and focus on the essentials of the presentation. Again, it is important that the instructor not dominate the task-oriented discussion session but rather facilitate the process and provide the expertise.

The use of small discussion groups is limited only by one's imagination and creative planning. And planning is the key word. For each discussion group session under consideration, the purpose, format, and desired outcomes of the meeting should be carefully planned.

Audiovisual Utilization

Selection of appropriate 16mm movies and videotapes has always been a difficult and time-consuming task. Through their monthly publication *Projection,* the Addiction Research Foundation, Toronto, Ontario, has eliminated much of the guesswork in selecting quality audiovisual material. Its audiovisual review committee presents ratings for drug and alcohol abuse films and videotapes produced in the Western World. The reviews are based on a six-point scale ranging from very poor, poor, fair, good, and very good to excellent. General categories include "Alcohol," "Drugs," and "Special Topics." Under "Special Topics" are such diverse items as "Attitudes and Values," "Communication," "Impaired Driving," "Industrial," "Law," "Professional Training," "Public Relations," "Sports," "Theory," "Treatment/Rehabilitation," and "Trigger Films." The reviews include information about purchase and rental price as well as availability.

1. *Movies and video cassettes.* A wide variety of movies and video cassettes are available in the field of alcohol and drug abuse. To use them wisely, one needs to consider how well they contribute to the objectives of the course. If they are to be used to emphasize a particular point or to raise the awareness of the audience on a particular issue, it is important to discuss the film or video cassette with students immediately after it is shown. Questions about student feelings and identification with characters are important. For example, if the film or video cassette arouses anger or suspicion, the instructor will need to help the students examine these feelings or attitudes. A film or video cassette should never fill in for a block of time simply because the instructor is ill prepared. See appendix B for an annotated selection of available materials.
2. *Tape-slide programs.* Tape-slide programs have the double impact of sound and image. There are numerous ways in which they can be used effectively in the alcohol and drug abuse field, including:
   a. Straightforward learning of basic principles, such as diagnostic criteria for alcoholism and drug abuse, detoxification regimens, introduction to treatment programs, etc.
   b. Presenting reference material, for example, a collection of slides and recordings of patient interviews or drug-use history taking
   c. Listening to recordings of historic or notable occasions and people
   d. Catching up on content missed because of illness or absence; also supplementing learning after discovery of gaps in knowledge
   e. Self-testing that enables the learner to check whether he or she is ready to proceed to the next step, or whether he/she has sufficient background knowledge to begin a particular course of study (Graves and Graves 1979)
3. *Audio cassettes.* Audio cassettes have long been used in all fields of continuing education. Their relative low cost permits students to purchase them for their own cassette libraries. Cassettes are especially useful in bringing noted authorities to the students. As with audiovisual aids, the instructor must be careful to use audio cassettes only as auxiliary material and not as a substitute for active discussion or experiential learning.

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Appendix A
Physician Education in Substance Abuse: Curriculum Objectives

This report presents the work of the AMERSA Committee on Substance Abuse Teaching Objectives (Davis 1980, pp. 28–33). These objectives are not intended to mandate how all medical schools are to teach about substance abuse. They definitely are intended to convey the opinion of experts as to what should be included in a medical curriculum on substance abuse. The goal has been to make available a broad scope of objectives to which schools can turn for guidance, both to maximize their own strengths and to cover areas of relative weakness while maintaining minimum standards.

The objectives are grouped according to subject areas that the committee found most helpful. They are not intended to be recommendations for course or lecture headings. Also, it is not felt that the order in which these objectives appear need be their order in a medical school curriculum. Where the committee has taken a stand is on establishing priorities within subject headings. These priorities are provided solely for the benefit of those curriculum committees and teachers who may be relatively new to the field and have not yet formulated their own priorities or determined their own best approaches to the teaching of substance abuse. Under each subject heading, there appear first the "Overall Objectives." These are sometimes called terminal objectives and refer to goals or expectations of students once they have completed their formal education. The overall objectives are followed by a longer and more detailed set of objectives, often called enabling objectives, which are intended to provide teachers with guidelines as to the content of their teaching that, if taught, will accomplish the overall objective. These are guidelines which, through experience, have appeared most helpful in developing curricula in this often ignored, yet crucial, area.

Curriculum Objectives

A. Definitions

1. Define the following as they relate to substance abuse:
   a. Abstinence
   b. Abuse
   c. Abuse potential
   d. Addiction
   e. Habituation
   f. Cross-addiction
   g. Cross-tolerance
   h. Dependence
   i. Enzyme induction
   j. Habituation
   k. Idiosyncratic reaction
   l. Misuse
   m. Physical dependence
   n. Potentiation
   o. Prevention: primary, secondary, tertiary
   p. Psychoactive
   q. Psychological dependence
   r. Synergism

Prepared by the Career Teachers in Alcohol and Drug Abuse and the Association for Medical Education and Research in Substance Abuse (AMERSA). Donald J. Davis, John E. Fryer, Ronald S. Krug, Geary Alford, Kim A. Keeley, Charles Buchwald, Joel Solomon, Charles L. Whitfield, and Kenneth S. Russell.

s. Tolerance: metabolic, pharmacologic, behavioral

t. Withdrawal syndrome

2. Describe various models of substance abuse (e.g., medical model, learning model, etc.).

3. Contrast the alcoholic vs. the problem drinker.

4. Contrast the addict vs. the nonaddicted user.

5. Differentiate between an objective medical vs. a moralistic understanding of "alcoholism" and "drug abuse."

6. List common criteria of substance abuse vs. use in terms of duration and frequency, social consequences, licit vs. illicit.

B. Epidemiology—Genetics

1. Outline various methods available to conduct and evaluate epidemiologic studies of population groups regarding substance abuse, incorporating incidence, prevalence, mortality, and morbidity.

2. Describe evidence about the role of heredity in the development of substance abuse (e.g., Winokur's hypothesis and enzyme polymorphism).

3. List the incidence/prevalence rates for use/abuse of various substances for the Nation and for selected populations (defined by demographic and other characteristics, such as associated diseases, inpatient/outpatient, etc.).

4. Describe the use of epidemiologic data for the development of governmental and program planning in the prevention, detection, and treatment.

C. Basic Sciences (Biochemistry, Physiology, Pharmacology, Pathology)

1. Be able to do the following:

a. Compare alcohol nutrient with carbohydrates, proteins, and fat.

b. Describe the reasons for nutritional deficits occurring with a high intake of alcohol.

c. Describe the effect of alcohol on vitamin metabolism, particularly pyridoxal phosphate (vitamin B_6), thiamine (vitamin B_1), ascorbic acid (vitamin C), and vitamin A.

2. Diagram the major metabolic pathways of alcohol degradation (include the major enzymes).

3. Describe the physiology and biochemistry of dependence and addiction, with special reference to the brain and liver.

4. List the types of substances of abuse, as per Goodman and Gilman. List some street names associated with each of these types of substances.

5. For commonly abused drugs, describe or outline:

a. Dosage levels and therapeutic range

b. Common behavioral and physiological effects

c. Common behavioral and physiological side effects

d. The physiology of withdrawal

e. The absorption, distribution, metabolism, and elimination

6. Explain drug-drug interactions among commonly abused substances, and between them and prescription drugs of any kind. List clinically significant examples.

7. List the acute and chronic pathologic effects of commonly abused drugs on the following systems:

a. CNS and PNS

b. CVS

c. GI

d. Skin

e. Respiratory

f. Endrocrine

g. Hematopoietic

8. Describe the ways in which detection technology is applicable to diagnosis and treatment of substance abusers.
9. Outline the pharmacologic action of disulfiram in the presence of alcohol.
10. List various roots of administration and describe the marked differences in the effects mentioned in item 4 above.
11. List the common adulterants of street drugs.
12. List the naturally occurring substances in blood that chemically resemble various drugs of abuse.

D. Sociocultural Factors

1. Compare and contrast substance abuse patterns in ghettos, suburban areas, and among medical school faculty. Outline a prevention program for each.
2. Evaluate the role of peer pressure in the prevention, development, and maintenance of substance abuse.
3. Describe factors that make physicians particularly susceptible to abuse of specific substances.
4. Discuss health care as a mechanism for addressing the needs of deviants (not in the negative sense) in our society. Include the points of "correctional theory" vs. "labeling."
5. Describe the ways in which cultural factors influence the use of various substances, using all the following groups: Italians, Jews, Irish, French, Chinese, and ghetto blacks.
6. Describe the ways in which the ritual or religious use of a substance relates to the development or prevention of abuse and dependence.
7. Describe economic and political issues that contribute to the growth and stability of substance abuse.

E. Psychological Factors

1. Describe the concept of the addictive personality and the controversy surrounding it.
2. Describe the concept of substance abuse as a symptom of an underlying emotional disorder.
3. Apply learning theory (e.g., classical, operant conditioning, etc.) to the phenomenon of substance dependence.
4. Describe how drugs as stress-coping mechanisms can affect various phases of the individual life-cycle.
5. Describe the role of denial as a defense mechanism in the substance abuser.
6. Compare and contrast the concepts of suicide, self-destructive behavior, and substance abuse.
7. Describe the concept of self-medication of emotional, behavioral, pathological symptoms. Include in the description sleep disturbance, depression, anxiety states, psychotic disorders, and personality disorders.
8. List nonpharmacologic factors (e.g., set, setting, and placebo) as contributing to the occurrence of an acute toxic (both positive and negative toxicity) drug response. Explain the contributions of preexisting psychosocial pathology and current life and interpersonal stresses.
9. Explain how substance abuse can be a form of coping and adaptational skill development.
10. Describe psychodynamic theories (e.g., drive and anxiety reduction) of the phenomenon of substance abuse.
11. Describe how the behavior patterns and lifesyles of substance abusers predispose them to prevarication.

12. In any given patient there is a complex interaction of psychologic, social, and pharmacologic factors. Compare and contrast at least four conceptual models, explaining the relation of these factors to the addiction process.

F. Diagnosis and Treatment of Overdose

1. List the expected pathophysiology of overdose from each of the separate substances of abuse.
2. Describe the appropriate pharmacologic, psychologic, and supportive intervention with overdose from each of the separate substances of abuse.
3. List expected psychopathologic states with overdose from each of the separate substances of abuse.
4. List the signs found on physical examination of overdose to each of the substances of abuse. Describe the continuum of signs present with low vs. high doses of the substance.
5. Outline the differential diagnosis of skull injury, hypoglycemia, diabetes, stroke, etc., and drug overdose or toxicity.
6. Outline the specific treatment for recurrent seizures from drug overdose.

G. Diagnosis and Treatment of Withdrawal States

1. List the expected pathophysiology of withdrawal from each of the separate substances of abuse.
2. Describe the appropriate pharmacologic, psychologic, or supportive intervention with withdrawal from each of the separate substances of abuse.
3. List the expected psychopathologic states with withdrawal from each of the separate substances of abuse.
4. List the signs found on physical examination of withdrawal from all of the substances of abuse. Describe the continuum of signs present with increasing dosage of the substance.
5. List several medical complications that may accompany or precipitate withdrawal.
6. List the substances of abuse that have no withdrawal symptoms.
7. Describe the settings, procedures, and persons necessary to treat withdrawal from the various substances of abuse.
8. Outline the specific treatment for recurrent seizures from drug withdrawal.
9. Outline the basic steps in the differential diagnosis of recurrent seizures that may be related to use of substances.

H. Diagnosis and Treatment of Substance Abuse

1. Describe the clinical aspects of substance abusers that might arouse feelings, such as anger, fear, and anxiety, in the physician, and how these feelings might lead to inhibitions about treatment.
2. Describe the phenomenon of relapse in substance abuse and its implications for treatment.
3. Describe how the concept of continuity of care applies to the substance-abusing patient.
4. Describe the spectrum of effects (signs and symptoms) of intoxication with each of the substances of abuse.
5. Having detected intoxication, outline the extended common course of treatment available irrespective of the substance involved.
6. Describe the signs, symptoms, psychopathology, and diagnostic criteria for chronic dependence in each of the major categories of substances of

abuse. Describe the common factors in chronic dependence.

7. Outline a substance abuse history and how it should be taken to include presenting problems, history of dependency, genetic factors, early developmental experiences, and social factors.
8. Given the realities of denial, prevarication, and and lack of collaboration in treatment by substance-abusing patients, describe an approach to supportive, nonrejecting confrontation of patients with substance abuse problems that would facilitate appropriate treatment intervention.
9. Describe approaches of intervention with the physician who has become dysfunctional from substance abuse.
10. Describe practices for the safe and efficacious prescribing of various psychoactive substances. Include dose and frequency, course of drug, emphasis on nonpharmacologic therapies, and specificity of target symptoms for which drug is used.
11. For the emergency treatment of possible drug-related conditions, outline the basic steps in diagnosis and the priorities in treatment of comatose patients, emphasizing vital support systems: respiratory, cardiovascular, IVs, urinary output, etc., and specific antidotes, e.g., naloxone.
12. List at least six findings on physical examination that would be either pathognomonic of, or highly suggestive of, current drug use, intoxication, or withdrawal.
13. List specific medical complications of chronic drug abuse that would be detected on a general physical examination.
14. Outline what must be covered in a psychosocial history to adequately rule out the presence of social consequences of substance abuse, with emphasis on (1) work history, (2) marital difficulties, (3) repeated accidents, (4) legal problems, and (5) social difficulties.
15. List at least five treatment referral alternatives for substance-abusing persons. Outline an adequate referral to each of these facilities.
16. Compare and contrast the positions that recommend the cautious use vs. the avoidance of psychoactive drugs in the treatment of substance abuse, with particular reference to never addicted, presently addicted, and previously addicted individuals.
17. Describe three central points in the course of evaluation and treatment where family involvement can be of benefit.
18. Describe how to motivate substance-abusing patients. Include problem areas, appropriate and inappropriate reinforcers, current personality variables, AA referral, religious supports available, etc.
19. List at least four criteria of success of treatment of the substance abuser.
20. Describe why pharmacologic intervention may frequently be inappropriate in certain cases of intoxication.
21. Describe the implications for treatment of the concepts: "the patient is a substance abuser" and "the patient has a substance abuse problem."
22. Describe the principles of crisis intervention, therapeutic community, and chemotherapeutic approaches for substance abusers. Compare and contrast these approaches, including their applications in outpatient vs. inpatient settings.
23. List three questions that would be useful to

determine what substances of abuse an individual might be using.

24. Describe social networks as contributors to substance abuse problems and as positive resources in the treatment strategy for the substance abusing patient.

25. The therapeutic approaches to the drug-using patient are multifaceted and multidisciplinary. The major strategies are sociotherapeutic, psychotherapeutic, and chemotherapeutic. Delineate the modalities and outline factors that would be indications for each of these therapies.

26. List special issues that are encountered in the consultative role to other physicians in their work with the substance abusing patient.

27. Explain the indications and limitations of each of the following three possible outcomes of psychiatric consultation for the substance-abusing patient: (a) improved treatment by primary care physicians and staff; (b) acceptance of the patient for treatment by the consultant; (c) referral to another treatment agency.

28. Compare and contrast criteria for and outcome of treatment for drug withdrawal (a) in hospital and (b) ambulatory.

29. Evaluate the relative prognosis of persons who are substance abusers. Include the dimensions of type of drug, age, sex, acute-chronic, and different treatment modalities.

30. List at least 10 subtle signs (other than drug taking behaviors) of incipient or recurrent abuse.

31. Complete the following table regarding direct and indirect medical complications of each category for the major drugs of abuse:

	Organ system	Medical complications	Treatment
Acute Intoxication			
Acute Withdrawal			
Long-term Addiction			

32. Outline the apparent prenatal and neonatal complications of maternal substance abuse.

33. Describe the results of specific diagnostic tests, such as urinalysis, Breathalyzer, blood drug levels, and blood chemistries, which would suggest acute and chronic substance abuse or withdrawal.

I. Legal—Ethical—Historical Aspects

1. Define the current DEA categories of drugs, demonstrating understanding of their development and rationale and where a listing of these categories may be found.

2. List the Federal and State rules for prescription writing in each of the DEA categories.

3. Describe the specific laws as they relate to medical practice for the following:

   a. Physician-patient communications
   b. Prescribing practices
   c. DWI, public intoxication
   d. Commitment and transfer procedures
   e. "Impaired physician" laws
   f. Breathalyzer, blood alcohol level analyses, and urine drug analyses.

4. Explain the medical ethics issues involved in the treatment of a substance dependent patient (e.g., confidentiality, detection/treatment, and research).

5. Outline the historical appearance and progression of use of alcohol, opium, marijuana, tobacco, sedative-hypnotics, amphetamines, and hallucinogens, and the various treatment approaches to treatment of abuse of these substances.
6. Describe how drug and alcohol use by physicians influences their practice.
7. Describe the legal measures that have been used historically to control the abuse of substances. Include the effects they have had.
8. Demonstrate an understanding of the Uniform Alcoholism Act and the Narcotic Addiction Act impact on health care and research practices.

J. Prevention

1. Demonstrate an understanding of primary, secondary, and tertiary prevention in relation to substance abuse (e.g., legal measures, educational methods, environmental manipulations, substitute preparations, technological control).
2. Describe the role of various secondary/tertiary prevention models, such as industrial programs, court-related programs, and fetal substance abuse detection programs, on the early detection of substance abuse.
3. List six ways in which attitudes of a behavior toward patients by house staff physicians influence the development by medical students of sound clinical skills in the treatment of substance abuse patients.
4. Demonstrate an understanding of the role of the physician prescribing practice in the prevention of substance abuse.
5. Outline a program of substance abuse prevention for the prevention of physician dysfunction from substance abuse.

Appendix B
Audiovisual Materials

I. Alcoholism/Alcohol Abuse

Films (16mm; color)

A Slight Drinking Problem, 1977
25 min.: rent or purchase

Availability:
Norm Southerly Productions
1709 E. 28th
Long Beach, CA 90806

Synopsis:
The troubles that befall an alcoholic are exascerbated by his wife's reactions and her attempts to deal with him. With the help of Al-Anon, she begins to deal with her own life.

Use:
Excellent for demonstrating the value of self-help groups such as Al-Anon.

Cause the Effect/Affect the Cause, 1973
23 min.; rent or purchase

Availability:
American Hospital Association
Film Library
840 N. Lake Shore Drive
Chicago, IL 60611

Synopsis:
Five hospital staff members and a police officer are confronted with an intoxicated patient. Each responds differently; each has a different effect on the patient's behavior. The film has three discrete parts, each segment followed by questions pertaining to staff behavior and attitudes.

Use:
Provocative, stimulating discussion about the history and proper medical and ethical management of this patient. Also good for presenting the attitudes toward an intoxicated person that can exist among hospital and law enforcement staff.

Doctor, You've Been Lied To, 1978
27 min.; free loan (not available for purchase)

Availability:
Ayerst Laboratories
685 Third Ave.
New York, NY 10017

Synopsis:
Films actor Patrick O'Neal, a recovering alcoholic, offers guidelines on identifying and confronting the alcoholic patient. The format is interviews with physicians and alcoholic patients. Information on the use of disulfiram (Antabuse) is given at the end of the film.

Use:
Since Ayerst Laboratories manufactures Antabuse, this film is one of the best sources of information on prescribing this deterrent drug for recovering alcoholics.

Francesca Baby, 1976
46 min.; rent or purchase

Availability:
Walt Disney Educational Media
500 S. Buena Vista St.
Burbank, CA 91500

Synopsis:
A mother's excessive drinking causes social and emotional problems for her daughters. The mother eventually goes to Alcoholics Anonymous. Based on a book of the same title.

Use:
Although long, the film is good for demonstrating the predicament of the teen children of alcoholics and the role Alateen can play in helping them resolve their problems.

Soft Is the Heart of a Child, 1978
20 min.; rent or purchase

Availability:
Operation Cork
P.O. Box 9550
San Diego, CA

Synopsis:
Family violence, child abuse, and neglect are depicted in a believable setting. An alcoholic father convinces his wife to join him in drinking. The film illustrates such themes as the family consequences of drinking, community paralysis, women as battered spouses and drinkers, children as victims and emissaries to the community, the role of the school, and enabling.

Use:
Demonstrates the effects of alcoholism on the family. Each of the three children responds almost predictably. Highly recommended for medical students.

The Enablers, 1978
23 min.; rent or purchase

Availability:
The Johnson Institute
10700 Olson Memorial Hwy.
Minneapolis, MN 55441

Synopsis:
The well-intentioned behavior of family, friends, and a supervisor helps an alcoholic mother-wife-employee-neighbor to continue her drinking. Each person close to the woman suffers yet seems unable to break out of a self-defeating pattern of interaction; each person is shown undermining the efforts of the other to gain control over the woman's problem. First of a two-part series with *The Intervention.*

Use:
Good for demonstrating the dynamics of the chemically dependent family and the process of enabling.

The Intervention, 1978
28 min.: rent or purchase

Availability:
The Johnson Institute
10700 Olson Memorial Hwy.
Minneapolis, MN 55441

Synopsis:
Second in a series with *The Enablers,* in this film the husband joins forces with the supervisor to gather together family and friends for coercive, constructive confrontation of an alcoholic wife-mother-employee-friend. The process of setting up such a confrontation is demonstrated, including the pitfalls to successful preparation.

Use:
Excellent for supplementing *The Enablers,* for demonstrating enabling family dynamics, intervention, and teamwork. Also good for demonstrating how one can help the emissary from a troubled family to motivate a chemically dependent person to seek treatment.

The Secret Love of Sandra Blain, 1976
27 min.; rent or purchase

Availability:
Hollywood Enterprises
6060 Sunset Blvd.
Hollywood, CA 90028

Synopsis:
The first in a three-part series, *The Secret Love of*

Sandra Blain is the convincing story of a middle class housewife whose hidden drinking becomes obvious to her family and friends. Denial by Sandra and her husband limits the effectiveness of therapy. Eventually the alcoholism becomes so severe that denial no longer helps Sandra deceive herself or those around her.

Use:

An excellent introduction to alcoholism and the middle class housewife. The film elucidates denial as one of the key factors in alcoholism.

The New Life of Sandra Blain, 1976
27 min., rent or purchase

Availability:

Norm Southerly Productions
1709 E. 28th
Long Beach, CA 90806

Synopsis:

Because of Sandra's alcoholism, she is denied custody of her children. She begins to drink again. The frustration with drinking problems eventually turns Sandra back toward treatment. This film is the second in the Sandra Blain series.

Use:

Useful in pointing out that relapses often occur in alcoholism treatment, but they need not cause despair.

Lisa: The Legacy of Sandra Blain, 1979
22 min.; rent or purchase

Availability:

Aims Instructional Media
626 Justin Ave.
Glendale, CA 91201

Synopsis:

Sandra Blain's daughter, Lisa, starts down the heavy drinking road following her mother's death. Lisa cannot be convinced she has a problem. Lisa is the third part of the Sandra Blain series.

Use:

Points out the fact that children who have one or more alcoholic parent are in a high risk group. Emphasis is on identifying "the problem" in oneself.

Video Cassettes

Alcohol and Drug Abuse Among Physicians, 1979
52 min. or two 26-minute showings; purchase

Availability:

Biomedical Communications Department
Tulane University School of Medicine
1430 Tulane Ave.
New Orleans, LA 70112

Synopsis:

This video cassette records candid, unrehearsed interviews with two rehabilitated doctors and their wives about their personal experiences with alcohol and drug abuse. The doctors and their wives honestly reflect on past problems of substance abuse and difficulties in rehabilitation in relation to the family and practice of medicine. Recorded before an audience of medical students, their questions add to the spontaneity of the film.

Use:

An excellent tool for promoting discussion of susceptibility to alcohol or drug dependence and encourages compassion for colleagues, as well as patients, with drinking and drug problems.

Alcoholics Anonymous: An Inside View, 1979
28 min.; rent as 16mm or long-term lease as video cassette

Availability:

Alcoholics Anonymous
Box 459
Grand Central Station
New York, NY 10163

Synopsis:

This video cassette takes the viewer inside a variety of AA meetings, from the smallest, intimate closed meetings to the large, open ones. It emphasizes the idea that AA is a way of life: Any time two members get together there is an AA meeting.

Use:

An excellent introduction to Alcoholics Anonymous; especially helpful for medical students prior to their visiting any AA meeting.

Alcoholism and the Physician (four-part series), 1981
Video cassette or 16mm film: free loan or purchase

Availability:

Operation Cork
8939 Villa La Jolla Dr.
San Diego, CA 92037
(714) 452–5716

Synopsis:

Through personal interviews and narration, *Attitudes* follows a physician from childhood through adulthood, showing how his attitudes toward alcoholics were formed. The development of patient attitudes is also explored. 22 min.

In *Early Diagnosis*, a variety of cases are presented in an interview setting. The video cassette demonstrates the underdetection of alcoholism because of the lack of blatant pathologies in the early phases of alcoholism. It also details appropriate and inappropriate responses to patients during interviews. 20 min.

Confirming the Diagnosis, Initiating the Treatment uses the interview format to present appropriate physician responses to denial, referral techniques, and patient participation in treatment techniques. 18 min.

The Physician's Role in Rehabilitation elucidates several treatment modalities, outlines the natural history of the rehabilitation process, and relates this process to the physician's role in treatment. 20 min.

Use:

A challenging series for students, undergraduate or graduate, who have had little exposure to alcoholism and alcoholism treatment modalities. *Attitudes* is an excellent statement on attitude development; *Early Diagnosis* is very helpful to students who are learning how to do early diagnosis or to interview effectively.

Decriminalization of Alcohol Abuse: Intake Procedures in the Emergency Room, 1976
33:12 min.; rent or purchase

Decriminalization of Alcohol Abuse: Control Techniques, 1977
38:50 min.; rent or purchase

Decriminalization of Alcohol Abuse: Medical Treatment of Acute Alcoholism, 1978
44 min.; rent or purchase

Availability:

Larry W. Monson
Director, Bureau of Alcohol and Other Drug Abuse
Department of Health and Social Services
1 W. Wilson St., Room 434
Madison, WI 53702

Synopsis:

This series of three video cassettes is designed to elucidate intake procedures in the emergency room as well as medical (drug) management of the acute alcoholic.

Intake Procedures details how emergency room personnel can obtain a drug-use history and how their attitudes and approaches to the patient affect the patient's response.

The second cassette *Control Techniques,* demonstrates techniques for restraining a violent patient. A psychiatrist explains the necessity for restraint and the proper use of "leathers."

Medical Treatment outlines the use of benzodiazipines to control detoxification problems. A discussion with a physician focuses on correct dosages and medical management.

Use:

Good introduction to emergency care of the intoxicated patient. Excellent for first-year medical students as well as other preprofessional students. Useful in inservice training of nursing and paraprofessional staff.

Identification of the Alcoholic Patient, 1978
22 min.; rent or purchase

Availability:

Department of Family Practice
University of Michigan School of Medicine
Ann Arbor, MI 48104

Synopsis:

Dr. Michael Liepman conducts a skillful interview using a student to portray a young patient in the early phase of alcoholism. Demonstrating a sensitive approach to the denial mechanism, the interviewer enables the patient to start taking an honest look at himself.

Use:

Good as an introduction to interviewing alcoholic patients as well as obtaining a drug-use history; appropriate for first or second year medical students.

It All Adds Up, 1979
11 min.; rent or purchase

Availability:

Marketing Department
Addiction Research Foundation
33 Russell St.
Toronto, Canada M5S 2S1
(416) 595–6056

Synopsis:

This documentary video cassette explores the problem of alcohol consumption. Comparing countries, the narrators discuss the growth of alcohol use as well as different forms of legislation that have been introduced to regulate it.

Use:

Very useful in pointing out international and legal issues surrounding alcohol consumption; not a key tape, however, if course time is limited.

The Physician's Role: The Diagnosis and Management of Alcoholism and Alcohol-Related Disorders, 1977
(A five-part training program developed by the Alcohol and Drug Dependence Clinic, Memphis Mental Health Institute, University of Tennessee Center for the Health Sciences; available in 5-hour video cassette or audio cassette; keyed to print materials.)

Current Trends in Alcoholism. 58:45 min.
Acute Phase of Alcoholism. 39:45 min.
Sub-Acute Phase of Alcoholism. 47:15 min.
Chronic Phase of Alcoholism. 51:15 min.
Patient Confidentiality. 28:17 min.
Aftercare. 28:19 min.

Availability:

The Southern Area Alcohol Education and Training Program, Inc. (SAAETP)
4875 Powers Ferry Road, NW

Atlanta, GA 30329
(404) 252–6811

Video cassette, five-part lecture and demonstration series: (Code No. SA–506): $1,500 (Specify format: ¾ Inch, VHS, or Betamax)

Audio cassette, five-part lecture and demonstration series: (Code No. SA–507): $175.

The Physician's Role—Print Materials

Program Manual—A Guide for the Physician (Code No. SA–501): $20.

Acute Phase—Emergency Room and Alcohol-Related Disorders (Code No. SA–502): $10.

Sub-Acute Phase—Medical Disorders (Code No. SA–503): $10.

Chronic Phase—Long-Term Management of the Alcoholic Patient (Code No. SA–504): $10.

Assessment, Test, and Evaluation Manual (Code No. SA–505): $15.

Synopsis:

A complete package for the continuing education of physicians and other medical professionals, *The Physician's Role* provides both an overview of alcoholism and criteria for treatment, along with education on the effects of alcohol on the body, understanding the three stages of alcoholism, emergency problems, diagnosis and alcohol-drug history, training in pharmacological approaches, aftercare, and assertiveness training.

Use:

Clear presentation of accurate and current information. Particularly useful to medical educators as a source of lecture material. Valuable resource to instructors of practicing physicians.

The Neonatal Abstinence Syndrome: Diagnosis, 1977
10 min.; rent or purchase

Availability:

Department of Psychiatry
Baylor College of Medicine
1200 Moursund
Houston, TX 77030

Synopsis:

Taped in the new born, intermediate care nursery of a large county hospital, this video cassette presents the diagnosis of the neonatal abstinence syndrome through history, laboratory findings, physical examination, and clinical behavior.

Use:

An excellent video cassette that clearly outlines diagnostic procedures for detecting the neonatal abstinence syndrome. Directed by two outstanding neonatologists, this tape is very helpful as an introduction to the clinical problems of neonatal withdrawal from chemicals.

The Neonatal Abstinence Syndrome: Management of the Acute Phase and Complications, 1977
12 min.; rent or purchase

Availability:

Department of Psychiatry
Baylor College of Medicine
1200 Moursund
Houston, Texas 77030

Synopsis:

The Neonatal Abstinence Syndrome discusses and demonstrates the medical management of a chemically dependent woman's infant. It describes conservative measures such as temperature control, diminishing sensory input, swaddling, and frequent feeding. The use of medication, including indications, choice of drugs, and the treatment regimen, is outlined. Recognition and treatment of complications are also discussed.

Use:

Provides a sound basis for effective management of this medical problem when used in conjunction with its companion tape, *The Neonatal Abstinence Syndrome: Diagnosis*. Most appropriate for students in their clinical rotations in obstetrics and pediatrics.

Slide Programs/Filmstrips

Alcohol Use and Its Medical Consequences, 1981
(A three-part series produced by Operation Cork)

Availability:

Milner-Fenwick, Inc.
2125 Greenspring Dr.
Timonium, MD 21093
(800) 638–8652

Biochemistry, Pharmacology, and Toxicology of the Alcohols. 49 slides: $100
Alcohol and the Liver. 59 slides: $115
Hematologic Complications of Alcohol Use. 40 slides: $85

Synopsis:

This slide series presents a clear, concise overview of the biochemistry, pharmacology, toxicology, and liver pathologies as well as hematologic complications of alcohol use.

Use:

Among the best available, this accurate and beautifully illustrated series is especially useful for students in the basic sciences. Highly recommended for any level of medical education.

Ten Weapons Against Indian Alcoholism, 1975

Availability:

Brigham Young University
Media Marketing
W–STAD
Provo, UT 84602
(801) 378–4071

Synopsis:

This series of 10 film strips deals with three aspects of alcohol problems among native peoples: community resources, treatment, and prevention.

The Community Alcoholism Coordinating Council shows a group of native people working together to coordinate all the resources in their community that deal with alcohol problems.

Before It's Too Late outlines one native community's approach to setting up a youth alcoholism council.

A Commitment to Sobriety: Antabuse outlines how antabuse works in conjunction with alcohol.

Courage to Change the Things I Can describes one man's attempt to start an AA group on his reservation.

I Want to Live is a case study of a man with an alcohol problem.

Try for Tomorrow deals with poor self-concept and its relationship to abusive drinking.

The Recovery Centre features three halfway houses for native peoples in the western United States.

To Say No presents the reality of peer pressure to drink among native teenagers.

Taking the Hard Way shows a young man who refuses to drink despite a drinking milieu.

Another Way reinforces a young man's desire to quit drinking.

Use:

Highly specialized series that highlights alcohol problems among native peoples. Preview is available and is recommended.

II. Drug Abuse

Films (16mm; color)

Born with a Habit, 1977
30 min.; rent or purchase

Availability:

Documentaries for Learning
Edward A. Mason, M.D.
Director
Harvard Medical School
58 Fenwood Road
Boston, MA 02115

Synopsis:

A number of physiological, psychological, and social problems are associated with the birth of children to narcotic-addicted mothers.

Use:

Recommended to help medical students understand the attitudes of women with addicted babies as well as the attitudes of healthcare professionals.

Elder Ed, 1977
30 min.; rent or purchase

Availability:

Order Section, GSA
National Archives and Record Service
Washington, DC 20409
(301) 763–1896

Synopsis:

Elder Ed is a three-part film dealing with the problems associated with prescription drugs and the elderly. The first part deals with the "new world" of drugs, which is confusing to some elderly persons. The second part deals with buying drugs wisely and includes a discussion with pharmacists regarding generic vs. brand names. The final segment of the film outlines ways to keep track of how the drugs are being taken (compliance).

Use:

Highly recommended as one of the few good films available on the subject of prescription drugs and the elderly. Provides medical students with information that will be helpful in treating elderly patients.

Gale is Dead, 1973
44 min.; rent or purchase

Availability:

British Broadcasting Corp.
135 Maitland St.
Toronto, Canada

Synopsis:

The opening scene is of the funeral of a 19-year-old who has died of a heroin overdose. Some of the 14 institutions where she spent her life are shown. Final interviews are with her friends, all heroin addicts.

Use:

Although rather long, this is a real "eye-opener" for those who have never seen a "real" heroin addict. Good for first course material.

Treatment of Acute Drug Overdose, 1972
32 min.; free loan or purchase

Availability:

Eli Lilly and Company
Indianapolis, IN 46206

Synopsis:

The film describes in detail techniques for emergency treatment of drug overdose victims

Use:

Usable in beginning courses in alcohol and drug abuse; not pharmacologically oriented. Somewhat dated.

Valium, 1977
18 min.; rent or purchase

Availability:

Carousel Films, Inc.
1501 Broadway
New York, NY 10036

Synopsis:

In this documentary, the extent of Valium use and its effects are discussed. The film concludes that doctors should be more responsible in prescribing this drug, and patients should be more careful in accepting it.

Use:

Excellent for pointing out pitfalls of over-prescribing. Fits well with any pharmacological subject matter at the undergraduate or graduate level.

Video Cassettes

Keep Out of the Reach of Adults, 1974
50 min.

Availability:

C.F.V. Television Network, Ltd.
Educational Film Distribution Department
Attention: Ms. Vicki Blake
42 Charles St., E.
Toronto, Canada M4Y 1T5

Synopsis:

This video cassette outlines how Canada has become a nation of pill poppers, examines the ethics of advertising, and inquires into the government's role in regulating nonprescription drugs.

Use:

Although too long for classroom use, makes a good adjunct to any medical course on chemical abuse. Canadian focus is not a drawback for U.S. audiences.

Appendix C
Other Teaching Materials/Resources

I. Materials

ADDICTION RESEARCH FOUNDATION and ONTARIO MEDICAL ASSOCIATON. *Diagnosis and Treatment of Alcoholism for Primary Care Physicians.* Toronto: Alcoholism and Drug Addiction Research Foundation, 1978. $1.95 each. Copies available from Marketing Services, Addiction Research Foundation, 33 Russell St., Toronto, Canada M5S 151.

AMERICAN MEDICAL ASSOCIATION. *Drug Abuse: A Guide for the Primary Care Physician.* Monroe, WI: American Medical Association, 1981. $17 each. Copies available from Order Department OP–323, American Medical Association, P.O. Box 821, Monroe, WI 53566.

AMERICAN MEDICAL ASSOCIATION. *Manual on Alcoholism.* 3rd rev. ed. Monroe, WI: American Medical Association, 1977. Copies available from Order Department OP–185, American Medical Association, P.O. Box 821, Monroe, WI 53566.

ANDREWS, T., and COHEN, S. Subject journal review: Drug and alcohol abuse periodicals. *Behavioral and Social Sciences Librarian* 1:59–77, 1979. This is an excellent review of substance abuse periodicals and the emphasis of each.

CAREER TEACHERS IN ALCOHOL AND DRUG ABUSE. *Current Items of Interest in the Field of Alcohol and Drug Abuse,* by Bemko, J. Brooklyn: Career Teachers in Alcohol and Drug Abuse. 1980. Single copies available from Career Teacher Center, Downstate Medical Center, 450 Clarkson Ave., Box 32, Brooklyn, NY 11203.

LEWIS, D.C. Diagnosis and management of the alcoholic patient. *Rhode Island Medical Journal* 63:1–3, 1980. Single copies of this article are available free from the National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852 (Order No. RPO301).

MASSACHUSETTS DEPARTMENT OF PUBLIC HEALTH, Division of Alcoholism. *The Office Treatment of the Alcoholic Patient,* by Mullin, C.S. Boston: Massachusetts Department of Public Health, 1978. Single copies available free from Division of Alcoholism, Massachusetts Department of Public Health, 755 Boylston St., Boston, MA 02116.

NATIONAL CLEARINGHOUSE FOR ALCOHOL INFORMATION, Health Professions Education Project. *Medical Abstracts for Educators in Alcohol and Drug Abuse,* 1980. Single copies available free from the National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852 (Order No. RPO308).

NATIONAL CLEARINGHOUSE FOR ALCOHOL INFORMATION, Health Professions Education Project. *The Primary Care Physician and the Patient with Alcoholism,* by Clark, W. D., 1980. Single copies available free from the National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852 (Order No. RPO-305).

NATIONAL INSTITUTE ON DRUG ABUSE. *Substance Abuse Knowledge Survey for Medical Students and Physicians.* Rockville, MD: NIDA, 1977. Single copies are available free from the National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852 (Order No. RPO304).

POKORNY, A., PUTNAM, P., and FRYER, J. E. Drug Abuse and Alcoholism Teaching in U.S. Medical and Osteopathic Schools, 1975–1977. In: National Institute on Drug Abuse *Alcohol and Drug*

Abuse in Medical Education, Galanter, M. E., ed. Rockville, MD: NIDA, 1980. pp. 7–19. Single copies of this article are available free from the National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852 (Order No. RPO303).

PROJECT CORK, DARTMOUTH MEDICAL SCHOOL. *An Annotated Reference List on Alcohol and Substance Abuse for Medical Educators,* 1980. Single copies are available free from the National Clearinghouse for Alcohol Information, P.O. Box 2345, Rockville, MD 20852 (Order No. RPO306).

VISTA HILL FOUNDATION. *Drug Abuse and Alcoholism Newsletter.* Published 10 times per year, this newsletter is available free from the Vista Hill Foundation, 3420 Camino del Rio North, Suite 100, San Diego, CA 92108.

II. Resources

Addiction Research Foundation
33 Russell St.
Toronto, Canada M5S 251
(807) 595–6000

The Addiction Research Foundation offers a number of educational materials for sale, including pamphlets, fact sheets, books, and audiovisual products. Two periodicals are published: *The Journal* and *Projection* (film and video review service). An *Educational Materials Catalogue* can be obtained by writing to the foundation.

Career Teacher Training Center in Alcoholism and Drug Abuse
State University of New York
Downstate Medical Center
450 Clarkson Ave., Box 32
Brooklyn, NY 11203
(212) 270–3150

Career Teacher Speaker, Consultant, and Trainer Bureau—The bureau maintains a listing of present and former Career Teachers who are medical educators and expert in various areas of alcohol and drug abuse and who are available as speakers, consultants, or trainers. All inquiries should be addressed to the Career Teacher Training Center at the above address.

Under the joint sponsorship of the National Institute on Drug Abuse (NIDA) and the National Institute on Alcohol Abuse and Alcoholism (NIAAA), Federal grants are available for a period of 3 years to support medical school faculty members (Career Teachers) interested in teaching alcohol and drug abuse. This program is designed to increase the quality and quantity of education in drug and alcohol abuse received by medical students, residents, and practicing physicians throughout the country.

For additional information concerning the Career Teacher Program, contact:

James F. Callahan, Deputy Director, Manpower and Training Division, National Institute on Drug Abuse
5600 Fishers Lane
Parklawn Building, Room 10A–46
Rockville, MD 20857
(301) 443–6720

Jeanne Trumble, Acting Chief
Human Resources Branch
National Institute on Alcohol Abuse and Alcoholism
5600 Fishers Lane
Parklawn Building, Room 11–19
Rockville, MD 20857
(301) 443–2070

Center of Alcohol Studies
Research Information and Publications Division
Rutgers University
P.O. Box 969
Piscataway, NJ 08854
(201) 932–3510

The Research Information and Publications Division of the Center of Alcohol Studies is concerned with the systemization of knowledge about human uses of alcohol. The division's specialists collect, classify, and abstract scientific literature on alcohol and alcoholism and make this organized knowledge available through the following publications and services. Prepaid orders are shipped postage free.

The Journal of Studies on Alcohol —A primary source of new information on all aspects of alcohol and alcohol problems; published monthly; $35 annual subscription. To order, write Journal of Alcohol Studies at the above address.

Other Publications —The Publications Division also publishes and distributes a variety of books, monographs, and technical and nontechnical pamphlets and reprints. A catalog of publications is available on request.

Bibliographies —A lits of more than 500 bibliographies is available on request. All bibliographies are updated continually and are keyed to abstracts in the RCAS collections. Photocopies of abstracts or full-text documents are also available. A fee of $2.50 covers photocopying costs.

Information Services —The Center of Alcohol Studies Library houses major collections of books, periodicals, dissertations, and other materials pertaining to alcohol studies. Full library services are available for use in person or by mail, including interlibrary loan and photo duplication of materials. For further information or to request services, contact Research Information Staff.

National Clearinghouse for Alcohol Information
P.O. Box 2345
Rockville, MD 20852
(301) 468-2600

The National Clearinghouse for Alcohol Information is an information service of the National Institute on Alcohol Abuse and Alcoholism (NIAAA). It is a central point where information is gathered from worldwide sources and disseminated to the field. The Clearinghouse offers the following products and services:

Information Requests

Responses and Referrals—Clearinghouse staff respond to individual inquiries of a personal, professional, or technical nature. They provide referrals to other agencies when appropriate.

Literature Searches—Clearinghouse specialists perform searches of computerized files containing citations and abstracts for scientific, technical, and programmatic documents in areas such as medicine, physiology, biochemistry, public health, psychology, animal research, treatment and therapies, mental health, legislation and criminal justice, safety, sociology, prevention and education, statistics, and special population groups.

Publications

The Clearinghouse distributes, free of charge, limited numbers of alcohol-related pamphlets, books, posters, and other materials published by NIAAA. These range from audiovisual information, to program idea books, to basic question-and-answer pamphlets, to reports to Congress summarizing the current scientific knowledge on alcoholism and alcohol abuse. Order forms and lists of materials are available.

Health Professions Education Project Package for Medical Educators—This package contains a wide range of curriculum resources for the instructor in alcohol and drug abuse.

Directories of Treatment Resources—Directories of alcoholism treatment programs provide information for each of the 50 States on type of program, services, admission requirements, and accreditation.

Alcohol Topics In Brief—The Clearinghouse produces a series of fact sheets that offer concise information on subjects of high interest to the alcoholism community. Current topics include alcohol and youth, alcohol and women, health insurance coverage for alcoholism, and minimum drinking age.

Selected Translations of International Alcoholism Research (STIARS)—Important foreign language articles are translated and made available by the Clearinghouse to researchers and other interested persons. Some topics include "Alcoholism in Women," "Recent Statistical Elements Concerning the Prevalence of Alcoholism in Italy," and "Heart Defects of Children From Alcoholic Mothers."

Law and Legislative Summaries (LLS)—A series of summary publications offers information on status, provisions, and other details relating to legislation at both the State and Federal level.

Subscription Services

The Clearinghouse offers three subscription services that are aimed at keeping professionals and nonprofessionals informed about the latest developments in alcoholism and alcohol abuse prevention, treatment, and research.

NIAAA Information and Feature Service (IFS)—Emphasizing trends in alcohol-related programming and research, the Clearinghouse produces a news series that covers educational developments, policy decisions, and local programs across the Nation. The activities of NIAAA and other alcoholism organizations are also reported. There is no subscription charge for this publication, which is issued 12 to 14 times per year.

Alcohol Health and Research World—The quarterly magazine of NIAAA has proved to be a reliable resource for those who want to keep abreast of current developments in the alcohol field. Regular features of the magazine include survey articles, new programmatic approaches, research findings, and in-depth reports on all aspects of alcohol, as well as book reviews.

The annual rate for *Alcohol Health and Research World* is $8.50 for domestic subscriptions ($10.65 foreign). To receive a 1-year subscription to *World* send your remittance to:

Superintendent of Documents
U.S. Government Printing Office
Department 35
Washington, DC 20402

Alcohol Awareness Service—This free service provides periodic, continuing notification of recent technical and scientific books, journal articles, conference proceedings, and programmatic materials. Alcohol Awareness Service registration forms are available from the Clearinghouse.

All requests for information, publications, and subscriptions should be mailed to the Clearinghouse at the above address.

National Council on Alcoholism (NCA)
Publications Department
733 Third Ave.
New York, NY 10017
(212) 986–4433

NCA distributes a wide variety of publications on all aspects of alcohol use and abuse. For a full listing, write NCA for a *Catalog of Publications*.

National Clearinghouse on Drug Abuse Information (NCDAI)

NCDAI serves as a focal point within the Federal Government for the collection, dissemination, and exchange of drug abuse information. If offers the following products and services:

Audiovisual Information

Audiovisual Loan Service—A free audiovisual loan service is operated through NCDAI. Films may be borrowed, one at a time, for a 14-day period, through interlibrary loan only. To reserve a film or other audiovisual, call (301) 443–6614. Mail interlibrary loan forms to:

NIDA Resource Center
5600 Fishers Lane
Parklawn Building, Room 10A–54
Rockville, MD 20857

Film Guides—Two publications are available: *Drug Abuse Films (1980)* and *Where the Drug Films Are: A Guide to Evaluation Services and Distributors.* This second publication provides sources of inexpensive and free loan audiovisuals from Federal, commercial, and nonprofit distributors. Single copies of each available free from:

NCDAI
P.O. Box 416
Kensington, MD 20795

Publications

NCDAI maintains an inventory of more than 300 publications that are disseminated free upon request. Materials of interest to physicians include:

Prevention/Education Materials—A wide range of topics are covered and available upon request.

Research Issue Series—A series that includes abstracts of research studies, one bibliography, and two essays on current issues of interest to the drug research community. Sample issues: *Use and Abuse of Amphetamine and Its Substitutes,* Issue 15; *A Cocaine Bibliography,* Issue 12; *Drugs and Psychology,* Issue 19.

Research Monograph Series—A series that provides critical reviews of current research problem areas and techniques, state-of-the-art conferences, integrative research reviews, and significant original research. Sample items: *Narcotic Antagonists: Naltrexone,* Monograph 9; *Review of Inhalants: Euphoria to Dysfunction,* Monograph 15; *Behavioral Tolerance: Research and Treatment and Implications,* Monograph 18; *PCP–Phencyclidine Abuse: An Appraisal,* Monograph 21.

SAODAP Monograph Series—A series of monographs originally developed by the Special Action Office for Drug Abuse Prevention and now available through NCDAI. These monographs are on a variety of research topics, including epidemiological studies and techniques for providing drug abuse treatment services. Sample item: *Outpatient Methadone Treatment Manual.*

Special Bibliographies—A series of annotated bibliographies for the professional or technical audience on current topics of interest. Sample item: *Methadone and Pregnancy.*

Technical Papers—A new series of scientific reviews for the professional or technical audience on drug abuse research issues. Sample item: *CNS Depressants.*

Special Reports—Sample items: *Acute Drug Reactions in a Hospital Emergency Room; The Aging Process and Psychoactive Drug Use; Marijuana and Health 1980; Medical Treatment for Complication of Polydrug Use; NIDA Research on Drug Abuse: Publications for the Scientific and Professional Community; Sedative-Hypnotic Drugs: Risks and Benefits; Consequences of Alcohol and Marijuana Use.*

Single copies of these and many other publications of use to the health professions educator may be obtained, free of charge, subject to availability. For complete monthly publication listing and order form, write to:

NCDAI
P.O. Box 416
Kensington, MD 20795

Medical Monographs (in print or in process)—This series provides medical personnel with current, practical information on drug abuse problems and treatment methodologies. May be used as a resource for practicing physicians or as a teaching aid.

Volume I, No. 4, October 1977:
Emergency Treatment of the Drug-Abusing Patient for Treatment Staff Physicians

Volume I, No. 5, January 1978:
Pharmacological and Toxicological Perspectives of Commonly Abused Drugs

Volume I, No. 6, August 1980:
Diagnosis of Drug and Alcohol Abusers

Volume I, No. 7, June 1979:
Primary Physicians Guide to Drug Abuse Treatment

Volume II, No. 1, July 1980:
Frequently Prescribed and Abused Drugs: Their Indications, Efficacy and Rational Prescribing

Volume II, No. 2, August 1980:
Treatment of the Drug and Alcohol Abuser

Single copies are available free from:

National Drug Abuse Center
Materials Distribution Facility
12112 Nebel St.
Box 5352
Rockville, MD 20852

Library

The Resource Center maintains an 800-volume back collection, subscribes to more than 400 scientific technical journals and newsletters, and maintains a collection of journal articles on microfiche. For additional information and loan policies, write to:

NIDA Resource Center
5600 Fishers Lane
Parklawn Building, Room 10A–54
Rockville, MD 20857

Mailing Lists

NCDAI maintains mailing lists for six subject areas: epidemiology, law/policy documents, prevention/education, research papers/reports, training, treatment. For further information or to be placed on one of these lists, write to:

NCDAI
Dept. ML
5600 Fishers Lane
Parklawn Building, Room 10A–53
Rockville, MD 20857

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